

CLAIMS

1. Inductive sensor comprising:

at least one sensor coil in the form of a structured, conductive layer of a carrier board;

and an evaluation circuit comprising a printed circuit board with conductor tracks provided thereon and being connected to the sensor coil;

wherein the carrier board carrying the sensor coil is mechanically rigidly and electrically connected to the printed circuit board by at least two soldered joints.

2. Sensor in accordance with claim 1, wherein one of the soldered joints comprises a solder finger protruding from one of the boards, and a solder surface arranged on the other board.
3. Sensor in accordance with claim 2, wherein both soldered joints comprise a solder finger protruding from one of the boards and a solder surface provided on the other board.
4. Sensor in accordance with claim 1, wherein one of the soldered joints comprises two solder surfaces joined to each other by solder, one of which is arranged on one of the boards.

- 5. Sensor in accordance with claim 4, wherein each of the at least two soldered joints comprises two solder surfaces joined to each other by solder, one of which is arranged on one of the boards.
- 6. Sensor in accordance with claim 4, wherein the boards are arranged relative to each other in such a way that the solder surfaces essentially border on each other.
- 7. Sensor in accordance with claim 4, wherein one of the solder surfaces extends transversely to the other solder surface.
- 8. Sensor in accordance with claim 7, wherein the two solder surfaces extend at an approximate right angle to each other.
- 9. Sensor in accordance with claim 1, wherein the at least two soldered joints are arranged on one side of the boards.
- 10. Sensor in accordance with claim 9, wherein at least one soldered joint arranged on one side of the respective board has associated therewith a corresponding soldered joint on an opposite side of the board.
- 11. Sensor in accordance with claim 1, wherein the printed circuit board and the carrier board abut on one another.
- 12. Sensor in accordance with claim 11, wherein the printed circuit board and the carrier board extend transversely to each other in an area of contact.

13. Sensor in accordance with claim 1, wherein the printed circuit board is arranged close to a plane of symmetry of the carrier board extending perpendicularly to the carrier board.
14. Sensor in accordance with claim 1, wherein at least one reference coil is associated with the evaluation circuit.
15. Sensor in accordance with claim 1, wherein the reference coil is formed by a structured, electrically conductive layer of the printed circuit board.
16. Sensor in accordance with claim 15, wherein the reference coil is integrated in the form of conductor tracks in the printed circuit board.
17. Sensor in accordance with claim 15, wherein the printed circuit board is provided with a reference coil arranged in the form of a structured, conductive layer on the printed circuit board.
18. Sensor in accordance with claim 15, wherein the reference coil is integrated into an intermediate layer between an upper layer and a lower layer of the printed circuit board.
19. Sensor in accordance with claim 1, wherein the sensor coil is surrounded by a screening provided in the form of a structured layer on the carrier board.
20. Sensor in accordance with claim 19, wherein the screening is in the form of a short-circuited winding.

21. Sensor in accordance with claim 1, wherein a damping element for the sensor coil, comprising a structured, electrically conductive layer on the carrier board, is arranged on the carrier board.
22. Sensor in accordance with claim 21, wherein the damping element comprises an electric resistor.
23. Sensor in accordance with claim 1, wherein the carrier board is additionally provided with an electronic component.
24. Sensor in accordance with claim 23, wherein the carrier board is provided with the electronic component on its rear side facing away from the sensor coil.